by Shannon Huniwell

Shannon's Broadcast Classics

a look back at radio & TV's golden years

Tiny Television Stations And TV Translators

It's one of those long-ago memories that isn't really much of a memory at all. That is to say, I probably recall the 1976 visit to New Jersey's smallest TV station only because my Dad has mentioned it so many times over the years. "Hey, Shannon," he'll begin, "How about that time we toured little Channel 40 down on the Jersey shore?" Then, to let him know it's okay to tell the tale again, I'll respond, "You mean that tiny black and white station in Wildwood?" Next, as if being cued by some famous director, my father describes the saga's setting.

Before the days of VCRs, my father was notorious for snapping pictures of TV station identifications. This one shows a WCMC-TV ID like the one given to me by an engineer at the little Wildwood UHF outlet. Dad shot it during our vacation, using a Kodak Instamatic without a flashcube, aiming at the motel's fuzzy, black & white television set.

Our family always took a short vacation in late November. Dad liked to complain that doing time with the in-laws *twice* during the holiday season was more than any sane citizen should suffer, so he made a point to take Mom, my brother, and me out of town to some fancy inn. There we'd stay in style for off-season rates, eat a nice restaurant-style Thanksgiving dinner, and see a few attractions. Mom would select one outing—usually some Christmas play—and Dad always picked a broadcast station for us to inspect. Of course, except for the NBC studios in New York, very few radio or TV facilities offered official tours. No matter, we just usually showed up in the lobby and, with his gift of gab, my father talked us past the secretary and into the inner workings of whatever AM, FM, or TV outlet seemed promising. (Once, we even got behind the control board of a modest shortwave station in Red Lion, Pennsylvania, but I'll save that episode for another column.)

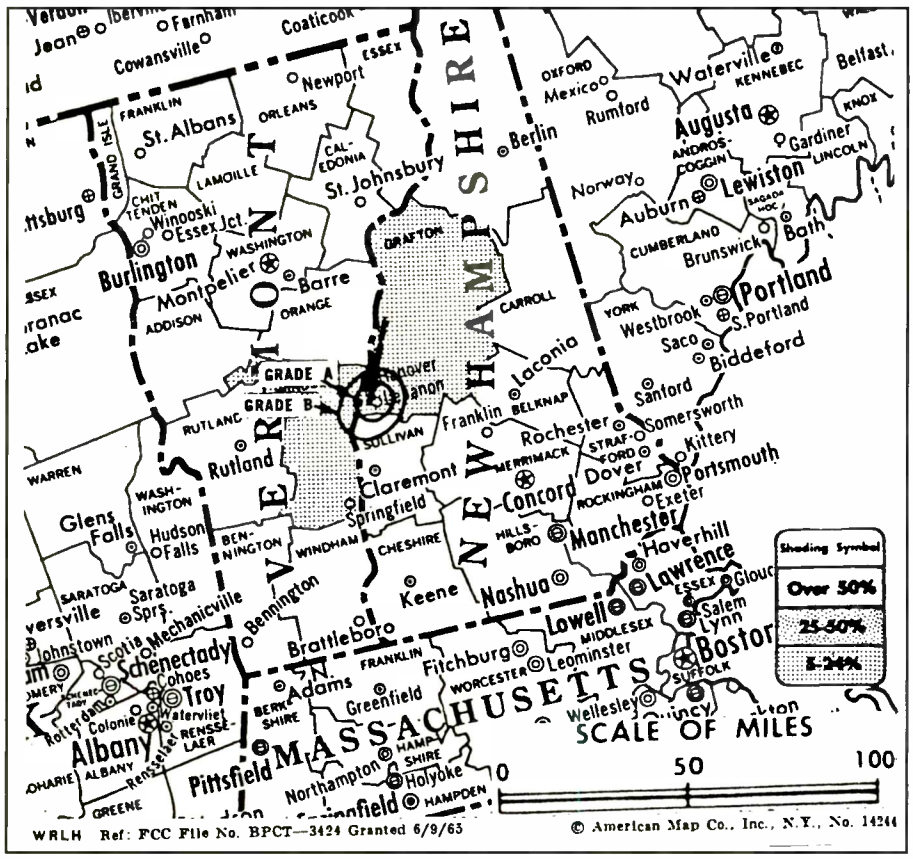
On this particular trip in 1976, on the day after Thanksgiving, Mom and my brother quickly volunteered to wait in the car and read, as the old house—emblazoned with the letters WCMC—that Dad parked next to didn't appear to be beckoning any tourist trade. In fact, when we called out "hello" in the lobby, no one responded. After another shouted query, my father shrugged his shoulders in a way that seemed to say, "Well, if nobody's here to greet us, we'll just have to explore on our own." A few seconds later, we startled an engineer who was adjusting overhead lighting in WCMC-TV's modest studio. I guess the sight of a smiling man with his seven-year old in tow didn't appear to be much of a threat to the television technician, who went right back up a small ladder after accepting my Dad's gregarious handshake and reason for our visit.

"My daughter, Shannon, and I are real broadcasting buffs," he offered, "and we'd be honored to see your unique AM-FM-TV operation." The soft-spoken engineer indicated that it was pretty quiet at the station, "especially because of the holiday weekend." He pointed across the hall to the FM and TV transmitters chugging away behind a pane of glass. Though I can't be sure now, it seems to me that the television unit was an old—even then—RCA with ample tubes peering through the portholes in a black steel cabinet. When the tech was satisfied with the bright white illumination bathing several rows of risers, he mentioned that a local choir was slated to be telecast at WCMC-TV that evening. "They'll sing some Christmas carols," he noted, "and get folks in the mood for holiday shopping at the sponsors' stores. It's a popular show around here because local folks like to see people on TV that they know—especially kids."

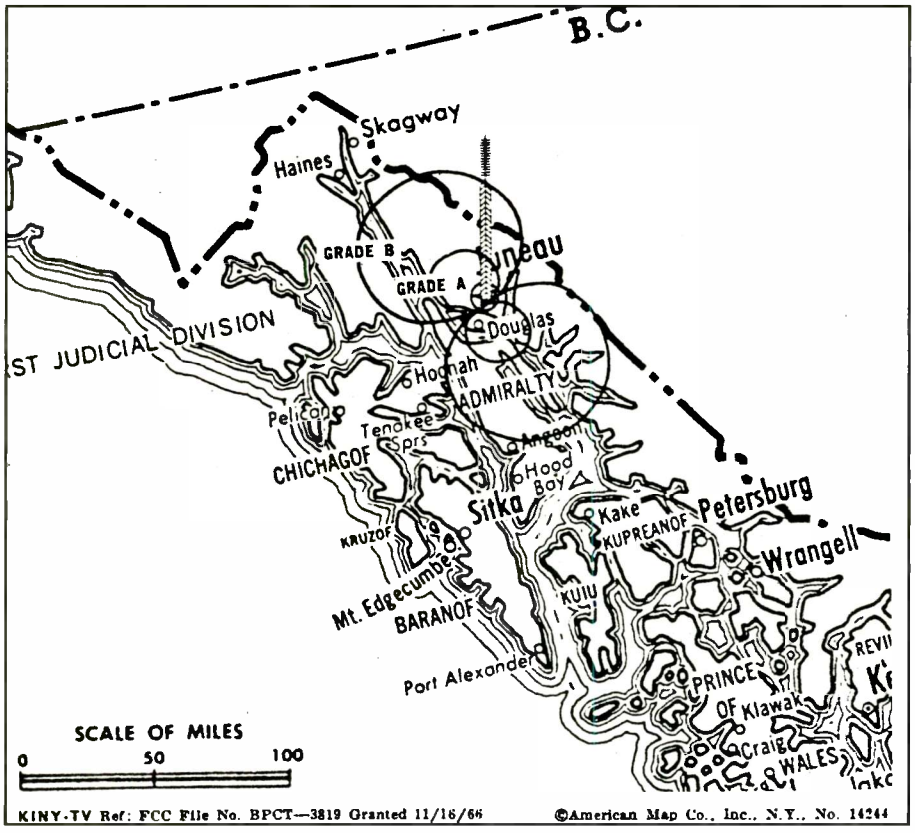
Finally, we peeked into the WCMC radio studio and saw a DJ reading a live commercial and starting one of the turntables. Dad brought up his customary exit request for a souvenir. The engineer apologized for not being quite sure where the station advertising rate cards and coverage maps were kept, but then he snapped his fingers as if having a better idea. A minute or so later, he handed me a 35-mm slide he had pulled from a control room drawer, saying "Here's something for you to take to show and tell, missy."

Holding it up to the fluorescent light fixture overhead, I made out the image of a colonial drummer boy marching near WCMC-TV's Channel 40 Wildwood, New Jersey, legal identification. The drummer's three-cornered hat said *1976*. "Because the bicentennial year is almost gone," the engineer smiled, "we won't be needing this any more." Dad and I gave a sincere thank you, and he had me promise that I would let my classmates know about the finer points of WCMC-TV.

Wildwood, New Jersey, rests on what can be considered an island broken off from the Garden State's southern tail. As a relatively remote community, Wildwood was a wonderful place for a small radio station to be located in late 1951, when WCMC (which stood for Cape May County) began as a 100-watter on 1230 kilocycles. By mid-December 1959, this local AM service (having upped power to first 250 and then 1000 watts) was joined



Real local TV—northern New England style. Thousand-watter Channel 31, WRLH-TV's 1967 area of greatest influence fell within the little circle over Lebanon, New Hampshire. Though there is no direct connection with the old WRLH-TV, today another Lebanon-area Channel 31 telecaster, WNNE-TV, lays down a multi-megawatt signal that blankets large portions of New Hampshire and Vermont.



by an FM sister, WCMC-FM, a 3.5-kW Class "B" facility at 100.7 on the dial.

The television side of the broadcast operation took to the air on UHF Channel 40 just a few weeks after 1966 got underway. Its antenna was mounted at the 223-foot level of a tower next to the WCMC building. The 1969 *Broadcasting Yearbook* lists the WCMC-TV effective radiated power (ERP) at 14 kW visual and 2,500 watts sound. Helping get the picture to area viewers, then, were seven small cable TV systems with a total of 36,000 subscribers.

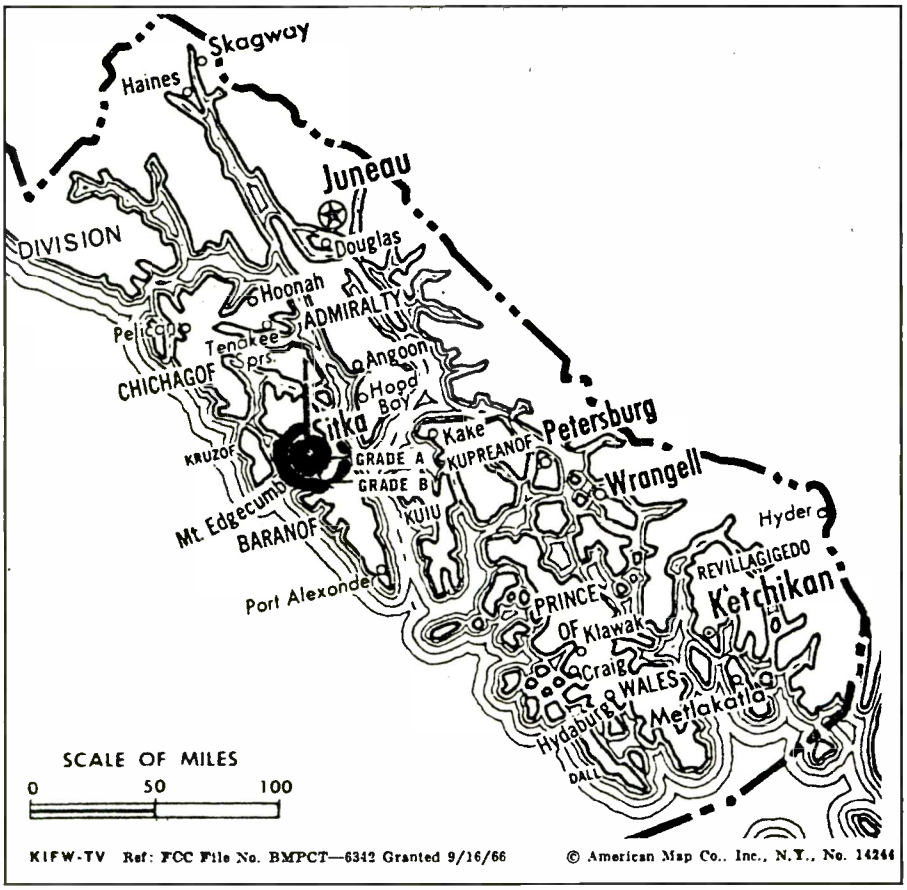
For years, the modest television property had the distinction of being New Jersey's only television network affiliate. That's because it ran NBC-TV fare that was simply received over the air from KYW-TV in Philadelphia. Otherwise, stations licensed to Philly or New York City provided most all New Jersey residents with their network television programming. Some 10 years after our visit, WCMC-TV was sold to an Atlantic City area broadcaster who moved the station to new transmitter and studio locales, beefed up the power, and renamed it WMGM-TV.

That Cute Little "U" Upon Craft's Hill

Around the time we were touring Wildwood's modest video outlet, an even smaller television facility (one it would also have been fun to see in person) called it quits. Lebanon, New Hampshire's WRLH-TV had taken to the air in late September 1966, aiming to serve viewers in the Lebanon/Hanover, New Hampshire (near Dartmouth College), and White River Junction, Vermont, area. This tiny TV operation sported only a 1,005-watt video ERP and just 105 watts of sound from a tower about 160 feet tall. Everything was run from a studio/transmitter site on Craft's Hill, well over 1,000 feet above sea level.

In the days before significant cable television penetration, WRLH-TV founder, Nelson A. Crawford, figured that his little Channel 31 UHF-TV station would provide a nice local service and also bring NBC network shows to the rural coverage area. Like the very basic WCMC-TV

The Grade "B" coverage appears to extend over 50 miles. That's a lot of punch from KINY-TV's 239 watts! No doubt viewers outside the KINY-TV primary or Grade "A" foot print needed good antennas.



Arguably CBS's tiniest affiliate, circa 1972. KIFW-TV's fringe coverage only reached about 10 miles. With most area viewers cozily situated within sight of Sitka's Channel 13, though, the station's 199 watts did the trick.

method of obtaining a network feed, Crawford installed a Yagi receive antenna for pulling in a useable picture from WWLP-TV in Springfield, Massachusetts. Channel 22, WWLP-TV had a sister station on channel 32, WRLP-TV in Greenfield, Massachusetts, which was a bit closer to Craft's Hill, so there was also a back-up plan for getting NBC to the WRLH-TV control board.

The station gave it the old college try for a decade, but without a set of co-owned radio stations (like WCMC AM/FM) to help support its operation, keeping WRLH-TV in black ink proved overly challenging.

California Dreamin' Slightly Ahead Of Its Time

Broadcast Pro-File's Jan Lowry knows vintage TV as well as he does his radio history. When I asked if any relatively small Golden State-based television operations came to mind, he quickly asked, "How about KKOG-TV Channel 16 at Ventura, California?" He continued,

It was put on the air in a "non-market" of San Buenaventura (legal name of town) on December 14, 1968, and went off September 13, 1969. This noble experiment was conducted by one Julian Myers, an L.A. advertising executive. KKOG-TV [Kalifornia's Koast Of Gold] was housed in a converted storefront and transmitted from atop nearby Red Mountain. The station's *two* studios were pumping out live local black & white programming all day long. Myers even employed a used 19-foot mobile unit for live remotes around town. A single color film chain and a low-band color video tape recorder were its only color sources.

Unfortunately KKOG-TV's timing was wrong, UHF set penetration was low, and local cable systems were unwilling to bump popular Los Angeles stations to let KKOG-TV have channel space. Mr. Myers invested his life savings and mortgaged his home to give life to his dream.

Myers was one of a handful of local programming-oriented UHF-TV proponents and should be definitely be considered a true television pioneer.

The 1969 *Broadcasting Yearbook* lists KKOG-TV as existing only as a construction permit. While the *Yearbook* is always an interesting resource, the late summer/early fall (of the year prior to publication date) deadlines created some informational lag times. In KKOG-TV's case, its listing went from "construction permit" to "ceased operations" in a single *Yearbook* publication cycle.

in the
Wilmington,
Delaware
market
WDEL-TV

reaches
more people
who buy more*

WDEL-TV is the *only* television station *in* this area. With NBC and DuMont network shows, many popular local night and daytime programs—it's the favorite with viewers throughout the area.

*IMPORTANT Wilmington is FIRST in per family buying income among all U. S. Metropolitan cities 100,000 to 250,000. (Sales Management—1951 Survey of Buying Power)

Delaware is FIRST in per capita buying income of any State. (U.S. 1948 Census of Business)

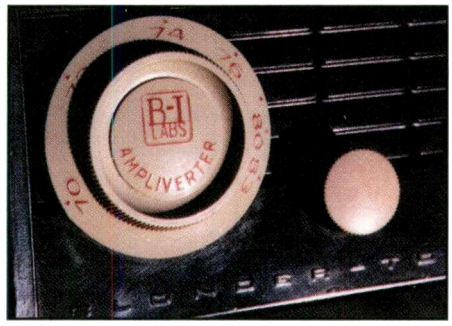
WDEL AM TV FM *Represented by* ROBERT MEEKER ASSOCIATES

Wilmington, Delaware's WDEL-TV began telecasting on Channel 7 in June of 1949. During the early 1950s, it still only put out 1 kW of effective radiated power. The station was sold several times and experienced call changes from WDEL-TV to WPFH-TV, and finally WVUE-TV. Due to a reallocation plan, the FCC deleted Channel 7 in Wilmington and added Channel 12. The station went dark and Channel 12 there was awarded to Philadelphia educational broadcaster WHYY.

Never really a "small" television station, still the early incarnation of Seattle's KING-TV only telecast with 19 kW of picture and 10 kW of sound. This channel first transmitter was an RCA model TT-5A. It and the related RCA TF-3A Superturnstile antenna were located at 301 Galer Street.

Incidentally, Ventura's Channel 19 was authorized for a little over 35-kW visual and just under 7-kW aural ERP. That's a lot more zing than our column's tiny New Hampshire station, but very modest by today's UHF-TV power norms.

I should mention that our study focuses on the smallest of what the FCC considers "full-power" television broadcasters. These are in contrast to the "low-power," or LPTV, service authorized in the 1990s. LPTV stations are not subject to certain rules and regulations mandated for their "regular" brethren, nor are they given the "full-power" stations' protections for the primary use of their operating frequency. Even so, semantics are in play here, as some LPTV operations have higher power than the "full power" outlets chronicled in this month's column. By the way, the FCC rules simply say that no application for a ("full-power") television station will be accepted unless the applicant proposes at least "100 watts of visual effective radiated power."



Close inspection of this circa 1963 Blonder-Tongue brand UHF-TV Ultraverter dial reveals it's built to receive only "translator" Channels 70 through 83. Though equipped to concentrate on only 14 channels (compared to a standard UHF-TV converter's 70) the Ultraverter specialization costs a bit more.

North To Alaska

Ironically, some of the most notable small TV stations were built in America's biggest state. Alaska's panhandle is home to VHF Channel 8 in Juneau that commenced operation in the winter of 1956. With an antenna situated 69 feet above ground, KINY-TV (now KJUD-TV) ran 239 watts of picture and 47 watts of sound. It featured both ABC and NBC network shows.

The present-day KTNL-TV at Sitka takes our teeny-weeny prize for having signed on as KIFW-TV (a CBS affiliate) during the fall of 1966 with a diminutive 199-watts visual and 30-watts aural power! KIFW-TV's signal radiated from an antenna positioned 157 feet above ground. Both the Juneau and Sitka television outlets were founded by broadcasters who operated AM stations in their respective communities.

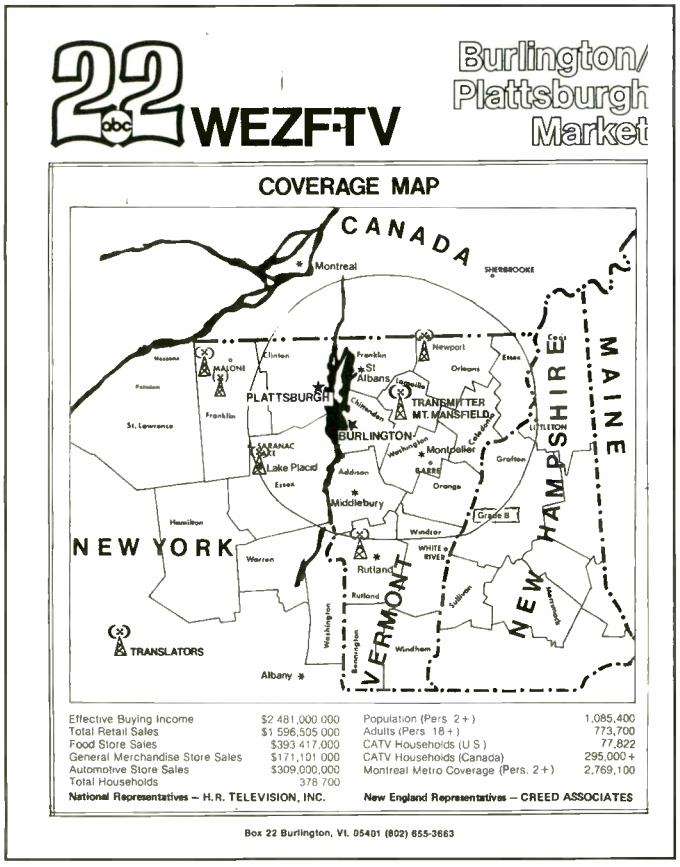
If you're wondering how so few watts could be employed in the huge 49th State, it's likely due to the compact nature of Juneau's and Sitka's population distribution. Most of the residents lived not far from the center of town, making it possible for a couple hundred watts or less to hit folks' nearby receive antennas. And in the case of locales with heavy cable penetration, any TV signal capable of reaching the cable system's "head end" receiving point will look crystal clear to every cable subscriber.

Translators

Prior to cable TV's widespread influence in areas without strong (Grade "A" or "B") broadcast television signals, the FCC came up with a way for enterprising broadcasters to reach the hinterlands (and neighborhoods in metropolitan venues where tall buildings adversely impacted TV coverage) with acceptable quality pictures. The FCC authorized the Television Translator service, by which a flea-powered transmitter with associated receiver and high-gain receive antenna could pull in a distant signal on, say Channel 25. It could then retransmit (or "translate) it on another channel (perhaps Channel 72) to viewers who'd otherwise not be able to get programming from that Channel 25 outlet.

If you imagine some idyllic country valley with a couple hundred homes nestled together and blocked from receiving a particular TV station because of sheer distance and surrounding mountains, you might picture the value of a translator. Using a high-gain receive antenna on a tower, it could, for example, take in a decent image of the ABC affiliate 50 miles away and send (on another channel) 100 watts or so of clear signal to those bucolic homes otherwise unable to get the ABC station's primary transmission. During the 1950s and '60s, the FCC assigned many such translators to UHF Channels 70 through 83 (or the 806- to 890-MHz range) in order to keep out of the way of most of the full-power UHF-TV outlets.

A now defunct TV translator at Torrington, Connecticut, serves as an example. There, through the 1970s, the signal from the Hartford area's Channel 30 (NBC affiliate WVIT-TV) was tough to see. Plus, cable wasn't hooked to a majority of homes. Circa 1971, the FCC authorized Channel 30's owners to build translator W79AI (translators' callsigns include their transmit channel number) way up on UHF Channel 79. The 100-watt unit served folks around Torrington. By the late 1980s, though, Channel 30 WVIT-TV boosted its main signal, plus cable delivered a fine picture from WVIT-TV. Reportedly, only a few people were



The coverage map of Burlington, Vermont's Channel 22 shows the location of its main transmitter and five translators. See how the two translators in Franklin County, New York, one between Saranac Lake and Lake Placid, New York, and another in Rutland, Vermont deliver programming to viewers who are either completely outside or on the far fringes of the main signal. That translator up near Newport, Vermont, was installed to provide picture clarity to TV homes that, though within the big transmitter's province, are shaded by mountainous terrain. By the way, this Channel 22 began as WVNY-TV, but had a stint as WEZF-TV before reverting to its original calls.

watching W79AI in 1987 when management decided to shut it off for good.

According to Peter George's wonderful UHF-TV website (http://www.geocities.com/radiojunkie1/W79AI.html), where a picture of the little Channel 79 can be seen, WVIT-TV never went back to Torrington to get W79AI's gear. Someone stole the tower, but the rest of the equipment is still there, though it's been ruined by critters and weather coming in through the defunct translator's leaky roof.

Curiously, the 1963 *Broadcasting Yearbook* shows a W79AD in Southampton, New York translating Connecticut's Channel 30. This seems peculiar because Southampton is way out on Long Island, many miles from central Connecticut. Perhaps at that time, though, Channel 30's tower was closer, as the crow flies, to Southampton than any other NBC-TV affiliate.

During the 1970s, the Commission started slowly bumping translators down the band so that Channels 70 through 83 could be reassigned to "land-mobile" communication, and then to cell phones. Today, FCC rule revisions end the UHF-TV band at Channel 65. By the way, as of last summer, there were over 2,600 UHF-TV translators on the air, and nearly 2,100 (some

When Channel 16 ceased operation, Broadcast Pro-File's Jan Lowry photographed its storefront studio not long before the broadcast gear and signage were removed.

with just a couple of watts) on VHF-TV channels. Many of these are located in rural western towns.

Translator-only UHF-TV Converters

True rarities among the set-top boxes that allowed VHF televisions to receive UHF-TV stations are the converters designed only to dial in the translator (or 70 through 83) channels. Among the companies offering such gizmos were Blonder-Tongue and Jerrold. The latter firm even sold the model UAP-7083, UHF Preamplifier for the viewer in the absolute fringes of a needed TV translator signal. The tube-fired preamp in a small birdhouse sized box was mounted to one's rooftop antenna mast. Its power supply was remotely located (probably in the attic).

Ben Tongue, the co-owner of the electronics firm that built Blonder-Tongue UHF-TV converters (its model 99 was arguably the early 1960s sales leader among all such adapters) recalled why his company offered a special UHF converter for just the very top of that television band. He said,

The BT-70B UHF converter was designed to provide the best possible weak-signal performance for two applications. The first was to maximize reception of the MPATI (Midwest Program on Airborne Television Instruction) signals in areas where the *Stratovision* educational broadcasts were receivable. [The MPATI program consisted of educational shows broadcast on the upper end of the UHF-TV band from an airplane doing wide figure eights high above America's heartland.] The second was for reception of low power TV Translators. The product utilized a selected, low loss Germanium diode mixer. The version of the double-tuned RF pre-selector had less insertion loss than that used in the wide tuning range 14 to 83 channel converters because, due to the restricted tuning range, a better optimized circuit could be designed. Another benefit from the design was the greater band-spread that enabled easier tuning. To further improve weak signal reception, B-T also offered a tunable UHF booster, UTB-1, that used one tube and covered the whole Channel 14 to 83 band. A September 1963 price list for the model BT70-B suggests it should retail for $46.15.

A Really Neat Broadcast-related Hobby

One evening, after working on a *Pop'Comm* column, I clicked

over to eBay and typed *UHF CONVERTER* in the search box. Only half expecting anything would be in this category, I was truly surprised to see over a dozen listings. The uncommon, aforementioned Blonder-Tongue UHF-TV converter caught my eye and ultimately came my way via a modest bid.

Not only did I learn about the existence of "Channels 70-83 only" units, the transaction also put me in contact with Mark Nelson from Massachusetts. Mark had put the item on eBay in order to slim down his sizable collection of vintage TV set-top boxes, both UHF converters and VHF-TV signal boosters. He says his "unique collecting niche was found several years ago when I decided to actively collect something television-related." He says he's, "been in TV engineering for many years [1971–1995] in various areas, and had just moved into a non-video job." Mike says he "loves them—early round-screen TV sets didn't seem practical to collect and restore—too bulky and expensive." He continued, "So, casting my mind back to when I was a kid, the boxes that sat on top or beside the TV set came into view."

He grew up in Warren, Ohio, 60 miles from Cleveland and Pittsburgh VHF stations, so as he says, "everyone had big 'rotatable' antennas and boosters. And nearby Youngstown had just become one of the first [and still one of very few] all-UHF towns, so UHF tuners were increasingly common." A few years ago he didn't know if such gadgets were still out there, but figured they'd be cheap and simple and small. In other words, ripe for collecting! After checking on eBay and at some local amateur radio hamfests, Mark's collection was launched. He notes that TV boosters and UHF-TV converters are pieces "of television history that are not remembered much, if at all, so I've made it my goal to preserve and help record their contribution to early TV."

How Radio "Gets Done"

Next time, among a variety of vintage AM and FM memories, we'll identify the drop of radio's past preserved in bottles of A-1 Steak Sauce.

Meanwhile, I shall sign off by saying...*and so ends another day of broadcast history from* Pop'Comm. ■

v.i.p. spotlight

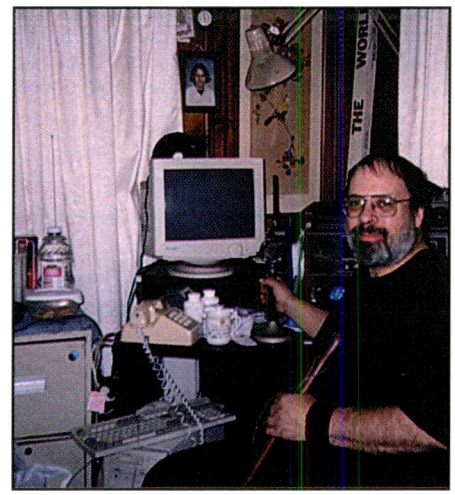
Congratulations To Bob Heinle, Jr., Of Pennsylvania!

Popular Communications invites you to submit, in about 300 words, how you got started in the communications hobby. Entries should be typewritten, or otherwise easily readable. If possible, your photo should be included.

Each month, we'll select one entry and publish it here. All submissions become the property of *Popular Communications,* and none will be acknowledged or returned. Entries will be selected taking into consideration the story they relate, and if it is especially interesting, unusual or even humorous. We reserve the right to edit all submitted material for length, grammar, and style.

The person whose entry is selected will receive a one-year gift subscription (or one-year subscription extension) to *Popular Communications*. Address all entries to: "V.I.P. Spotlight," *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801 or e-mail your entry to popularcom@aol.com.

Our March Winner: Bob Heinle, Jr.



Pop'Comm *reader Bob Heinle, Jr., at his radio post in Pennsylvania.*

Bob tells us,

I enjoy reading *Pop'Comm* very much. My radio listening started when I was about five years old with a Rocket Crystal set. When I was a teenager we used a pair of three-channel CB walkie-talkies, which got me hooked. From there I had a tube clock radio which my younger sister now has. I'm 51 years old and retired.

When I was eight I bought two books on shortwave listening and ham radio, but didn't get far with no "Elmer" to help me. I always listened to AM broadcast radio, and in 1969 bought an AM radio. We also had a German shortwave radio with AM/FM and record player from the early 1960s until 1977. It was a tube radio, and I heard President Kennedy's demise on it. What a shame!

I also bought a six-channel RadioShack CB and 102-inch whip antenna for my van. I had customized a couple of vans in the 1970s when I got married in '74. I used the CB during the 1970s' gas crisis when I had to drive from home in Doylestown, Pennsylvania, to Coatesville, Pennsylvania, to date my girlfriend. Mary was later my wife—for a while. It was a 56-mile run and the CB came in handy. We got married in 1974 and used CB for communication between us then we met others in the hobby and helped form the Diamond T Radio Club in 1976 and helped with community activities.

I also got a used tube-operated shortwave, which I rebuilt with new tubes and fixed the analog slide tuning with nylon fishing line. It worked quite well; I think the radio is still up at my parent's summer place in the Pennsylvania mountains.

In 1986 my wife divorced me and I got into shortwave listening. I started studying for my No-Code ham license while I worked at Hatfield Auto Auction. I knew enough to get my ticket, but working hard and all, it just wasn't feasible to get my license. Right now my Mom and I are studying the books for taking our Tech class test.

Right now I have scanners, CB radios with SSB, shortwave radios with SSB, and I also have military comm phones from the Vietnam era, which I use as an intercom to talk to my son in the apartment upstairs. I also have a Pentium I computer, which I don't like too much—I really like radios more. I really want to build a 2-meter beam when I get my ham ticket. I just bought a Kenwood TM-2530A.

My old CB callsign is KGS-8775 from 1975. Thanks again for a great magazine. ■